

CLAIMS:

- 5 1. A mixed resin compound in a desired shape formed by injection molding from a molding material containing a mixed resin composed of two or more kinds of resins differing in the rate of crystallization, wherein said resins are mixed in pellet form and the resulting mixture of pellets is injection-molded as such.
- 10 2. The mixed resin compound as defined in Claim 1, wherein said mixed resin comprises (A) at least one resin component selected from a polyamide resin obtained from metaxylylenediamine and adipic acid, a polyamide resin obtained from ϵ -caprolactam, and an alloy resin obtained by
- 15 blending a polyamide resin with a resin having a water absorption no higher than 0.3%, and (B) at least one of the other resins.
- 20 3. The mixed resin compound as defined in Claim 1, which contains an electrically conducting material dispersed therein.
- 25 4. The mixed resin compound as defined in Claim 3, which contains carbon black as the electrically conducting material.
5. The mixed resin compound as defined in Claim 4, which contains the carbon black in an amount of 5-30 weight%.
- 30 6. The mixed resin compound as defined in Claim 1, which contains a reinforcing inorganic filler.
- 35 7. The mixed resin compound as defined in Claim 6, which contains the reinforcing inorganic filler in an amount of 1-30 weight%.
8. A photosensitive drum consisting of a cylindrical base

and a photosensitive layer formed on the outer surface thereof, wherein the cylindrical base is formed from the mixed resin compound as defined in Claim 1.

5 9. A process for producing a resin pipe by injection molding from a thermoplastic resin or a resin compound based on said thermoplastic resin, wherein the molded product undergoes annealing after demolding.

10 10. A process for producing a resin pipe as defined in Claim 9, wherein the resin compound contains at least one resin component selected from a polyamide resin obtained from metaxylylenediamine and adipic acid, a polyamide resin obtained from ϵ -caprolactam, and an alloy resin obtained by
15 blending a polyamide resin with a resin having a water absorption no higher than 0.3%.

11. A process for producing a resin pipe as defined in Claim 9, wherein the annealing is carried out at 100-140°C
20 for 0.5-2 hours.

12. A process for producing a resin pipe as defined in Claim 9, wherein the resin pipe is an electrically
conductive resin pipe formed by injection molding from an
25 electrically conductive resin compound composed of a thermoplastic resin and an electrically conducting material dispersed therein.

13. A process for producing a resin pipe as defined in
30 Claim 12, wherein the electrically conductive resin compound contains carbon black as an electrically conducting material.

14. A process for producing a resin pipe as defined in Claim 13, wherein the content of the carbon black is 5-30
35 weight%.

15. A process for producing a resin pipe as defined in Claim 9, wherein the electrically conductive resin compound is one which contains a reinforcing inorganic filler dispersed therein.
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16. A process for producing a resin pipe as defined in Claim 15, wherein the content of the reinforcing inorganic filler is 1-30 weight%.
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17. A process for producing a resin pipe as defined in Claim 9, wherein the resin pipe is a base for a photosensitive drum.
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18. A photosensitive drum consisting of a cylindrical base of electrically conductive resin compound and a photosensitive layer formed by coating on the outer surface of said cylindrical base, wherein the outer surface of the cylindrical base has a surface roughness equal to or smaller than 0.2 μm in terms of Ra (center line average height) and
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- equal to or smaller than 0.8 μm in terms of Rmax (maximum height).
19. A photosensitive drum as defined in Claim 18, wherein the electrically conductive resin compound contains at least
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- one resin component selected from a polyamide resin obtained from metaxylylenediamine and adipic acid, a polyamide resin obtained from ϵ -caprolactam, and an alloy resin obtained by blending a polyamide resin with a resin having a water absorption no higher than 0.3%.
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20. A photosensitive drum as defined in Claim 18, wherein the electrically conductive resin compound contains carbon black as an electrically conducting material.
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21. A photosensitive drum as defined in Claim 20, wherein the content of the carbon black is 5-30 weight%.

22. A process for producing a resin pipe as defined in Claim 18, wherein the electrically conductive resin compound is one which contains a reinforcing inorganic filler dispersed therein.

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23. A photosensitive drum as defined in Claim 22, wherein the content of the reinforcing inorganic filler is 1-30 weight%.

10 24. A photosensitive drum consisting of a cylindrical base and a photosensitive layer formed by coating on the outer surface thereof, wherein the cylindrical base is an electrically conductive resin pipe formed from an electrically conductive resin compound which contains as a
15 base resin having a Vickers hardness no lower than 15.

25. A photosensitive drum as defined in Claim 24, wherein the base resin of the electrically conductive resin compound contains at least one resin component selected from a
20 polyamide resin obtained from metaxylylenediamine and adipic acid, a polyamide resin obtained from ϵ -caprolactam, and an alloy resin obtained by blending a polyamide resin with a resin having a water absorption no higher than 0.3%.

25 26. A photosensitive drum as defined in Claim 24, wherein the electrically conductive resin compound contains carbon black as an electrically conducting material.

27. A photosensitive drum as defined in Claim 26, wherein
30 the content of the carbon black is 5-30 weight%.

28. A photosensitive drum as defined in Claim 24, wherein the electrically conductive resin compound is one which contains a reinforcing inorganic filler dispersed therein.

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29. A photosensitive drum as defined in Claim 28, wherein the content of the reinforcing inorganic filler is 1-30

weight%.

30. A resin pipe obtained by injection molding from a thermoplastic resin or a resin compound based on said thermoplastic resin, wherein said thermoplastic resin or the base resin for said resin compound is a resin having a coefficient of linear expansion no larger than $1.0 \times 10^{-4}/K$.

31. A resin pipe as defined in Claim 30, which contains at least one resin component selected from a polyamide resin obtained from metaxylylenediamine and adipic acid, a polyamide resin obtained from ϵ -caprolactam, and an alloy resin obtained by blending a polyamide resin with a resin having a water absorption no higher than 0.3%.

32. A resin pipe as defined in Claim 30, wherein the resin pipe is an electrically conductive resin pipe formed by injection molding from an electrically conductive resin compound composed of a thermoplastic resin and an electrically conducting material dispersed therein.

33. A resin pipe as defined in Claim 32, wherein the electrically conductive resin compound contains carbon black as an electrically conducting material.

34. A resin pipe as defined in Claim 33, wherein the content of the carbon black is 5-30 weight%.

35. A resin pipe as defined in Claim 30, wherein the electrically conductive resin compound is one which contains a reinforcing inorganic filler dispersed therein.

36. A resin pipe as defined in Claim 35, wherein the content of the reinforcing inorganic filler is 1-30 weight%.

37. A resin pipe as defined in Claim 30, wherein the resin pipe is a base for a photosensitive drum.

38. A photosensitive drum consisting of a cylindrical base and a photosensitive layer formed by coating on the outer surface thereof, wherein the cylindrical base is a resin pipe defined in Claim 30.

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39. A photosensitive drum consisting of a cylindrical base and a photosensitive layer formed from a solution containing a photosensitive material by coating on the outer surface thereof, wherein the cylindrical base is an electrically
10 conductive resin pipe formed from an electrically conductive resin compound which has a flexural modulus no lower than 7×10^3 MPa.

40. A photosensitive drum as defined in Claim 39, wherein
15 the electrically conductive resin compound contains at least one resin component selected from a polyamide resin obtained from metaxylylenediamine and adipic acid, a polyamide resin obtained from ϵ -caprolactam, and an alloy resin obtained by
20 blending a polyamide resin with a resin having a water absorption no higher than 0.3%.

41. A photosensitive drum as defined in Claim 39, wherein
the electrically conductive resin compound contains carbon
black as an electrically conducting material.

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42. A photosensitive drum as defined in Claim 41, wherein the content of the carbon black is 5-30 weight%.

43. A photosensitive drum as defined in Claim 39, wherein
30 the electrically conductive resin compound is one which contains a reinforcing inorganic filler dispersed therein.

44. A photosensitive drum as defined in Claim 43, wherein
the content of the reinforcing inorganic filler is 1-30
35 weight%.

45. A photosensitive drum made up of a resin pipe as a base, a photosensitive layer formed on the outer surface of the base, and a separately formed resin flange pressure-fitted into at least one open end of the base, wherein the
5 resin pipe is formed from a resin material having a flexural strength no lower than 100 MPa.

46. photosensitive drum as defined in Claim 45, wherein the resin material from which the resin pipe is formed is an
10 electrically conductive resin compound containing at least one resin component selected from a polyamide resin obtained from metaxylylenediamine and adipic acid, a polyamide resin obtained from ϵ -caprolactam, and an alloy resin obtained by
15 blending a polyamide resin with a resin having a water absorption no higher than 0.3%.

47. photosensitive drum as defined in Claim 45, wherein the electrically conductive resin compound from which the resin pipe is formed contains carbon black as an
20 electrically conducting material.

48. photosensitive drum as defined in Claim 47, wherein the content of the carbon black is 5-30 weight%.

49. photosensitive drum as defined in Claim 45, wherein the electrically conductive resin compound is one which contains a reinforcing inorganic filler dispersed therein.
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50. photosensitive drum as defined in Claim 49, wherein the content of the reinforcing inorganic filler is 1-30 weight%.
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51. photosensitive drum consisting of a cylindrical base and a photosensitive layer formed on the outer surface
35 thereof by coating and drying from a solution containing a photosensitive material, wherein the cylindrical base is an electrically conductive resin pipe formed from an

electrically conductive resin having a thermal conductivity no lower than 0.2 W/m · K.

52. photosensitive drum as defined in Claim 51, wherein
5 the electrically conductive resin compound contains at least
one resin component selected from a polyamide resin obtained
from metaxylylenediamine and adipic acid, a polyamide resin
obtained from ε-caprolactam, and an alloy resin obtained by
10 blending a polyamide resin with a resin having a water
absorption no higher than 0.3%.

53. photosensitive drum as defined in Claim 51, wherein
the electrically conductive resin compound contains carbon
black as an electrically conducting material.

54. A photosensitive drum as defined in Claim 53, wherein
the content of the carbon black is 5-30 weight%.

55. A photosensitive drum as defined in Claim 51, wherein
20 the electrically conductive resin compound is one which
contains a reinforcing inorganic filler dispersed therein.

56. A photosensitive drum as defined in Claim 55, wherein
the content of the reinforcing inorganic filler is 1-30
25 weight%.

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